

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

TRANSLATION

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

(PCT Rule 43bis.1)

		Date of mailing (day/month/year)	See form PCT/ISA/210
Applicant's or agent's file reference 302I/18485 d/s		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/EP2005/000369	International filing date (day/month/year) 15.01.2005	Priority date (day/month/year) 21.01.2004	
International Patent Classification (IPC) or both national classification and IPC B01J8/02			
Applicant UHDE GMBH			

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/EP2005/000369

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
 - a sequence listing
 - table(s) related to the sequence listing
 - b. format of material
 - in written format
 - in computer readable form
 - c. time of filing/furnishing
 - contained in the international application as filed.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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Box No. V <u>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</u>																			
<p>1. Statement</p> <table> <tr> <td align="center">Novelty (N)</td> <td>Claims <u>1-8</u></td> <td align="center">YES</td> </tr> <tr> <td></td> <td>Claims _____</td> <td align="center">NO</td> </tr> <tr> <td align="center">Inventive step (IS)</td> <td>Claims <u>1-8</u></td> <td align="center">YES</td> </tr> <tr> <td></td> <td>Claims _____</td> <td align="center">NO</td> </tr> <tr> <td align="center">Industrial applicability (IA)</td> <td>Claims <u>1-8</u></td> <td align="center">YES</td> </tr> <tr> <td></td> <td>Claims _____</td> <td align="center">NO</td> </tr> </table> <p>2. Citations and explanations:</p> <p>1. Closest prior art.</p> <p>D1 (US2002/0098136), which is considered to be the closest prior art, discloses a process and an apparatus for the injection of oxygen in which oxygen is injected tangentially between two catalytic fixed beds (see D1: International Search Report). The fixed beds here are cylindrical.</p> <p>2. Novelty.</p> <p>The subject matter of claims 1 and 5 differs from D1 in that oxygen is introduced into a ring distributor system and is ejected from a plurality of outlet openings in the ring distributor system at an angle deviating from the vertical onto the catalyst surface of a catalytic fixed bed, with radial flow.</p> <p>3. Inventive step.</p> <p>The technical problem addressed compared to D1 is to achieve better mixing of the reactants in a radial reactor. The introduction of oxygen at an angle deviating from the vertical directly onto the catalyst surface of the fixed bed allows rapid mixing of the reactants to be achieved (see description: page 2, paragraph 1). D1 describes only introduction of oxygen between the two fixed beds. The subject matter of claims 1-8 can be considered to be inventive (PCT Article 33(3)).</p>		Novelty (N)	Claims <u>1-8</u>	YES		Claims _____	NO	Inventive step (IS)	Claims <u>1-8</u>	YES		Claims _____	NO	Industrial applicability (IA)	Claims <u>1-8</u>	YES		Claims _____	NO
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